

## MAYO - COUNTY GEOLOGICAL SITE REPORT

<b>NAME OF SITE</b>	Ocamhal (Killary Harbour)
Other names used for site	Uggool
<b>IGH THEME</b>	<b>IGH11 Igneous Intrusions</b>
<b>TOWNLAND(S)</b>	<b>Mweelin; Doovilra</b>
<b>NEAREST TOWN/VILLAGE</b>	<b>Louisburgh</b>
<b>SIX INCH MAP NUMBER</b>	<b>105</b>
<b>ITM CO-ORDINATES</b>	<b>476040E 767620N (centre of features)</b>
<b>1:50,000 O.S. SHEET NO. 37</b>	<b>GSI BEDROCK 1:100,000 SHEET NO. 10</b>
<b>GIS Code MO083</b>	

### **Outline Site Description**

Rocky exposures at a remote coastal landscape, to the west of Mweelrea Mountain.

### **Geological System/Age and Primary Rock Type**

Palaeocene (66 to 56 million years ago) igneous (analcime-olivine dolerite) dykes cutting through sandstones of the Mweelrea Formation (Ordovician age). (The features are widely referred to as being Tertiary in age. The term 'Tertiary' referred to the period from 65 Ma to 2.6 Ma, but has been replaced by 'Palaeogene' as a standard unit by the International Commission on Stratigraphy).

### **Main Geological or Geomorphological Interest**

The features consist of multiple igneous dykes that are up to 15m wide in places. Up to four episodes of the igneous intrusions (injection) have been identified at the site. The features are related to the opening of the Atlantic Ocean.

The dolerite dykes are alkaline, and exhibit a characteristic mineralogy including analcime and abundant olivine. The dykes are oriented in a north-westerly (070°) trending direction. The dykes have been dated as forming c. 58 Ma ago (Palaeocene in age). They have been described as sheet intrusions and belong to a swarm of dykes known as the Killary West System. The site is associated with two other groups of dykes in the region: the Inishbofin System and the Killary Central System.

A suggested source for the dolerite dykes is a c. 50km diameter igneous body called the Brendan Centre, located 150km west of Galway. However research also suggests an igneous source nearer to the Palaeocene dyke swarms in Mayo and Galway.

### **Site Importance – County Geological Site**

This County Geological Site is important as it is one of a group of five related swarms of NE-WS trending igneous dykes in west-central Ireland. These dolerite dykes form a distinctive sub-province in the Irish-British Palaeocene volcanic province related to the opening of the North Atlantic Ocean, approximately 60 Ma. The site is located within the Mweelrea/Sheefry/Erriff Complex SAC (001932).

### **Management/promotion issues**

The integrity of this site is not deemed to be under threat. There have been issues concerning public access to the site and surrounding area at Doovilra and Uggool in the past. It is necessary to seek permission before attempting to visit the site. For this reason the site is not deemed suitable for public promotion.



An overview of the coastal areas and site (arrow) from the summit of Mweelrea (Photo: M. Parkes).



North part of beach at Uggool. Mweelrea Formation rocks on the shoreline (left) and above the beach. The dolerite dykes occur inland in the centre background of the photo (Photo: Coastal Helicopter Survey, Office of Public Works, 2003).

